

Appl. No. 10/647,762
Amdt. dated 09/26/2005
Reply to Office action of 09/02/2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(currently amended) A planarizing process comprising:

providing a first layer of a material having an upper surface;

etching in said first layer a cavity having a floor;

forming on said cavity floor a copper coil, having at least 5 turns and a DC resistance that is less than about 3 ohms;

applying a layer of photoresist to a thickness that is more than sufficient to cover said lower coil;

hard baking said layer of photoresist and then planarizing so that between about 1.5 and 2 microns of remaining hard baked photoresist extends above said upper surface;

coating said layer of baked photoresist with a layer of alumina; and

then planarizing by means of chemical mechanical polishing until said coil is just exposed and no photoresist remains on said upper surface, said layer of alumina serving to stabilize said baked photoresist layer whereby said baked photoresist layer does not delaminate as said upper surface is approached and termination of planarization is facilitated.

2.(original) The process recited in claim 1 wherein said cavity has a depth between about 2 and 3 microns.

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3.(original) The process recited in claim 1 wherein said cavity has a width between about 20 and 60 microns and a length between about 6 and 10 microns.

4.(original) The process recited in claim 1 wherein the step of forming a copper coil further comprises:

depositing a conductive seed layer;

defining a location and shape for said coil by means of a photoresist pattern and then electroplating copper to a thickness between about 1.5 and 2.5 microns onto all areas not covered by said photoresist;

stripping away all photoresist; and

then removing all areas of the seed layer that are not covered by copper.

5.(original) The process recited in claim 1 wherein the step of applying a layer of photoresist further comprises use of spin coating.

6.(original) The process recited in claim 1 wherein the step of hard baking said layer of photoresist further comprises baking in nitrogen for between about 150 and 250°C for between about 1 to 5 hours.

7.(original) The process recited in claim 1 wherein said layer of alumina is deposited to a thickness between about 5 and 6 microns.

8.(original) The process recited in claim 1 wherein said layer of alumina is deposited by means of sputtering.

9-30 (canceled)